Vis/NIR Simulation Details

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Vis/NIR Simulation

Uses same truth information as IR and microwave. Primary factors for Vis/NIR radiances are:

- Solar and viewing geometry.
- Surface type.
- Cloud height and fraction.
- Water vapor column abundance (distribution assumed).

Additional assumptions:

- Each Vis/NIR pixel is 100% clear or cloudy. Imposes quantization of 1.4% on cloud fraction in IR footprint.
- Treat high, thin Cirrus as a middle cloud.
- Clouds distributed pseudo-randomly within IR FOV.
- Use look-up table for radiances without interpolation.
- No BRDF effects. All surfaces and clouds are Lambertian.

Other items to consider:

- Surface NDVI map used for retrieval is perfect.
- Simulation has difficulty distinguishing snow from water—Tsurf mismatch.